

The *iniB*, *iniA* and *iniC* GENES OF MYCOBACTERIA AND METHODS OF USE

Abstract of the Disclosure

This invention relates to the identification, cloning, sequencing and characterization of the *iniB*, *iniA* and *iniC* genes of mycobacteria which are induced by a broad class of antibiotics that act by inhibiting cell wall biosynthesis, including the first line antituberculosis agents, isoniazid and ethambutol. The present invention provides purified and isolated *iniB*, *iniA*, *iniC* and *iniB* promoter nucleic acids which may comprise the *iniBAC* operon, as well as mutated forms of these nucleic acids. The present invention also provides one or more single-stranded nucleic acid probes which specifically hybridize to the *iniB*, *iniA*, *iniC* and *iniB* promoter nucleic acids, and mixtures thereof, which may be formulated in kits, and used in the diagnosis of drug-resistant mycobacterial strain. The present invention also provides methods for the screening and identification of drugs effective against *Mycobacterium tuberculosis* using induction of the *iniB* promoter.